Civil 3D Cross Sections

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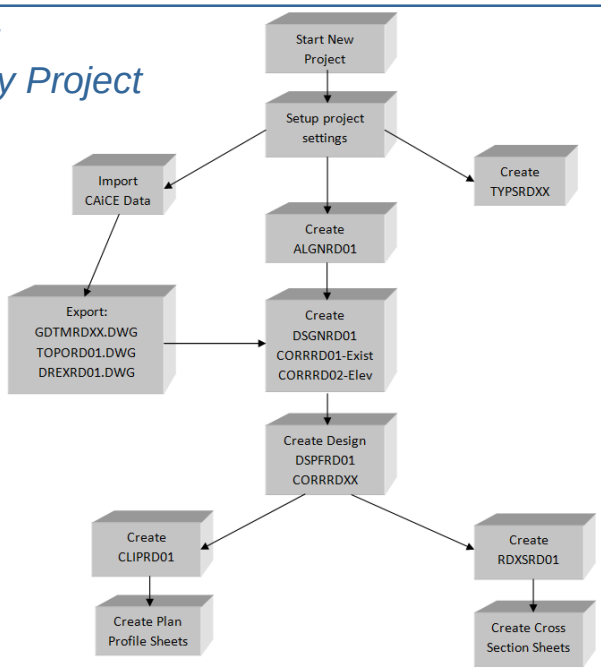
Civil 3D FDOT Basic Roadway Project Overview

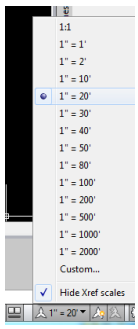


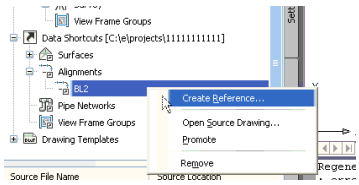
Essential Civil 3D Objects for Cross Sections

- Alignment
- Sample Lines
- Something to Sample
  - XREF Corridors
    - Design……CORRRD##
    - Existing Conditions……CORRD01-Exist
  - DREF Surfaces……..GDTMRD##
  - Pipe Networks
    - Design……DRMPRD##,UTPRRD##
    - Existing……DREXRD##, UTEXRD##

Xsections

1. Create RDSXRD##.DWG using **CREATE FILE**
2. Set the Drawing Scale for your Sheets. This will set the Horizontal Scale.
3. Lock your viewport
4. Create Data Reference from design baseline Alignment used in the corridor.
   - In Toolspace Prospector tab:
     1. *Data Shortcuts > Alignments > [Alignment Name]*
     2. Right click the **[Alignment Name]**
     3. Select *Create Reference*
     4. *Create Alignment Reference*
     5. *click OK to accept defaults*
        Tip: Styles do not matter here.





Xsections – Additional References

1. Create External References from files to be Sampled.
   - Existing Ground DTM
   - Corridors
     - Existing Conditions
     - Point Labels
     - Design Corridor(s)
2. Create Data References for surfaces or pipe networks as required in the cross sections.

Create Sample Lines

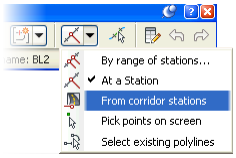
Home tab > Profile & Section View panel > Sample Lines

Select the alignment to pull section stations from.

Note: the alignment selected MUST be the design baseline for the Corridor, if more than one PGL, you must get the right one.

1. Set the sample lines to pick up the corridor stations and to show the *Create Sample Lines – From Corridor Stations* dialog.
2. Click on the ***Sample Line Creation Methods > From Corridor Stations***

❖ ***Hint -*** *Typically the only sample lines you should be pulling are the ones that are where your corridor stations are. If you choose anything else you will not see your design or if you've pulled surfaces from your design, non-daylighting links when they are supposed to daylight. This is due to the fact that any station other than the designed stations are interpolated.*



Sample Line Settings

1. Set the station range and swath widths. Set the values then click *OK*
2. Close the *Sample Line Tools* (click on the X) to save the sample lines. You'll see the lines appear on the screen.
   - *Swath width controls how the cross section looks on the sheet. Currently the sections can only be placed at the left side of the sheet. Depending on the sheet template chosen and the horizontal scale, you will want to set your swath width accordingly*.

Hint

Sample Line *Swath Width* is the tool used to control the centering of the section of the 0 offset axis. Here is a tested list of swath widths to place the 0 offset at the centermost major vertical axis. Theoretically the values are linearly proportional – ie, 40 scale shows a 280 swath. 20 scale should be able to get the same results with 140. 10 scale should use 70 for swath width.

	Left Swath Width	Right Swath Width
SHXSC or SHXSG		
40 scale	280	280
20 scale	140	140

Create Multiple Sections

1. Start the Create Multiple Section Views wizard. Home tab > Profile & Section Views > Section Views > Create Multiple Views

Create Section Sheets

- Output Tab>Plan Production>Create Section Sheets
  - ✓ Select Alignment, Group and Section View Group
  - ✓ Edit Layout name
  - ✓ Select
- Select Create Sheets